

and without grinding surface. Color brownish, without conspicuous spots; sides and lower part of head silvery.

This species is described from three specimens, each about $2\frac{1}{2}$ inches in length, from the Upper Missouri region, collected by Dr. F. V. Hayden. This species is allied to *H. hyostomus* Gilbert, and *H. cestivalis* Girard. The former has a more projecting snout, the latter a smaller eye, and both are profusely speckled with black dots.

CONTRIBUTIONS TO THE HISTORY OF THE COMMANDER ISLANDS.

No. 4.

A. NOTES UPON THE PLANTS COLLECTED ON THE COMMANDER ISLANDS (BERING AND COPPER ISLANDS) BY LEONHARD STEJNEGER.

By ASA GRAY.

The collection of phanerogamous plants, although not numerous in species, is full of interest.

The *Ranunculaceæ* are *Anemone Richardsoni*, *A. narcissiflora*, *Ranunculus Eschscholtzii*, *R. auricomus* (which, at least, in the var. *cassulicus*, has been found in Kamtschatka), and a form probably of *R. repens*, *Caltha palustris*, *Coptis trifolia*, and *Delphinium elatum*.

The *Cruciferae* are of small interest, a dwarf *Nasturtium palustre*, *Barbarea vulgaris*, *Arabis Gerardi*, var. *borealis* of Regel, *Cardamine hirsuta* and *C. pratensis*, *Draba incana*, and a small species which may be *D. alpina*. *Viola mirabilis* var. *Langsdorffii* of Regel, and *V. biflora* of Regel are all of that order.

Of *Caryophyllaceæ* there are *Silene acaulis*, *Lychnis apetala*, *Arenaria peploides*, *A. lateriflora*, and *A. macrocarpa*, the remarkable *Stellaria radians*, and the anomalous form of *S. humifusa*, called var. *oblongifolia* by Ledebour, with long and lax stems, elongated internodes, and a habit quite unlike the ordinary form of the species; also the forms of *Cerastium alpinum*, which are common in that region.

Claytonia sibirica and *C. arctica* represent the *Portulacææ*, and *Geranium erianthum* represents its order.

It is rather remarkable that there is only one leguminous plant in the collection, namely, the widespread *Lathyrus maritimus*.

The *Rosaceæ* are *Spiræa kamtschatica*, *Geum calthifolium*, *G. Rossii*, and a dwarf *G. macrophyllum*, *Sibbaldia procumbens*, *Potentilla fragiformis*, var. *villosa* of Regel and Tiling, and the ubiquitous *P. Anserina* and *P. palustris*, *Rubus stellatus*, and *R. Chamæmorus*, and a small-leaved *Pyrus sambucifolia*.

Saxifragæ are rather numerous: A dwarf *S. Hirculus*, and a still smaller one, which seems to be *S. chrysantha*, Gray; *S. bronchialis*, *S. unalaschensis* of Sternberg (which is *S. flabellifolia* and near to *S. Dahurica*, which we seem not to possess, the North American plant, so called,

being *S. Lyalli* of Engler); *S. bracteata*, peculiar to the region, and *S. punctata*, partly in a form approaching the var. *nana* of the Point Barrow collection. *Chrysosplenium alternifolium*, *Parnassia palustris*, and a little *Drosera rotundifolia* were also collected.

Epilobium latifolium, *E. roseum*, and apparently *E. affine* of Bongard, *Ligusticum Scoticum* and *Selinum Benthami* of Watson, unhappily not in fruit, and *Cornus Suecica* finish the *Polypetalæ*, and *Linnaea borealis* was also collected.

The *Compositæ* are *Aster peregrinus* of Pursh, *Achillea multiflora*, *Chrysanthemum arcticum*, *Matricaria discoidea*, *Artemisia Richardsoniana*, *A. norvegica*, and *A. vulgaris*, var. *Tilesii*, *Arnica unalaschensis*, *Saussurea alpina*, *Picris hieracioides* var. *Japonica*, *Hieracium triste*, and a large form of *Taraxacum officinale* var. *lividum*.

Campanula lasiocarpa was collected in fine state.

Ericaceæ are more largely represented by *Vaccinium oxycoccus* and a form of *V. ovalifolium* (var. *Chamissonis* of Bongard), *Arctostaphylos alpina*, *Cassiope lycopodioides*, and a single scanty specimen of a very marked new species, most related to *C. Stelleriana*, which in foliage is so much like *Vaccinium vitis Idæa* or *oxycoccus* that it is named *C. oxycoccoides*; also *Loiseleuria procumbens*, *Bryanthus (Phyllodoce) taxifolius*, and *B. aleuticus*, and, best of all, the original *Bryanthus Gmelini* of Don., which we had never before seen. It was known to occur on Bering Island, and it is a great satisfaction that Mr. Stejneger detected it. A view of the flowers certainly weakens the strength of my conviction (acted upon in the Synoptical Flora of North America) that *Phyllodoce* should be referred to the same genus. But a consideration of the parallel differences offered by the corolla of *Cassiope* inclines me still to maintain the view which I had ventured to take. The other *Ericaceæ* are *Ledum palustre*, *Kalmia glauca*, *Rhododendron kamtschaticum*, *R. chrysanthemum*, and *Pyrola minor*. We may here append *Diapensia lapponica*, which occurs in the sparsely-leaved form, named by Maximowicz, var. *asiatica*.

The remaining *Gamopetalæ* are *Trientalis europæa* var. *arctica*, *Primula cuneifolia*, *Gentiana glauca*, and the still rarer *G. auriculata*, *Polemonium cœruleum* and its var. *acutiflorum*, *Mertensia maritima* in a very large form, the rare and local *Veronica kamtschatica* and *V. Stelleri*, as well as the widespread *V. serpyllifolia* and *V. americana*, *Pedicularis Chamissonis*, *Gymnandra Gmelini*, and *Plantago major* var. *asiatica*.

The *Apetalæ* include a very large-leaved and robust *Polygonum viviparum*, *Rumex arcticus*, *Betula nana*, and the following willows, which have been determined by Mr. Bebb, viz., *Salix speciosa*, Hook & Arn., single specimen with male catkin, and several forms of *S. crassifolius*, Trev., which Anderson has combined under the name of *S. Pallasii*.

The *Monocotyledons* are *Fritillaria Kamtschaticensis*, *Majanthemum bifolium*, var. *Kamtschaticum*, *Veratrum album*, *Tofieldia calyculata*, *Iris setosa*, *Orchis aristata*, *Habenaria borealis*, *Luzula campestris*, and *L. spa-*

dicea, var. *parviflora*; and of *Glumaceæ*, *Carex gynocrates*, *C. stylosa*, *C. podocarpa*, *C. Gmelini*, and *C. cryptocarpa*, with *Eriophorum polystachyum*, *Alopecurus alpinus*, *Phleum alpinum*, *Festuca rubra*, *Poa glumaris*, *P. caesia*, and *Hierochloa borealis*.

The higher Cryptogams are few: *Lycopodium annotinum*, *Botrychium lunaria*, *Aspidium Lonchitis*, *A. aculeatum*, too young for certain determination, *Phegopteris polypodioides* in the same condition, *Equisetum hyemale*, and *E. arvense*.

The Mosses collected it is not in our way to name.

B. ADDITIONAL NOTES ON THE PLANTS OF THE COMMANDER ISLANDS.

By LEONHARD STEJNEGER.

A few remarks concerning the vegetation of the Commander Islands will be found in the letter to Professor Baird, forming "No. 1" of these "Contributions" (Pr. U. S. Nat. Mus. VI, 1883, p. 63-69). Unfortunately for my botanical collection, my time was too much occupied by other studies and occupations during the short flowering season. Many more plants, however, than those named in the preceding and the following notes were actually collected, but I had to deplore the total ruin of a large portion on account of the humidity of the climate. My collection would have been still smaller had it not been for the kind zeal of Mr. Nicolai Björkquist, *cand. philos.*, to whom I am greatly indebted for valuable additions to my herbarium from Copper Island.

The names and the sequence of the species adopted in the following list are very nearly those of Dr. J. T. Rothrock's "Sketch of the Flora of Alaska" (Smithsonian Institution Annual Report 1867, p. 433-463), in order to facilitate comparison with the flora of the American islands of the Aleutian chain. The figures following the names refer to the volume and page of Ledebour's "Flora Rossica," the nomenclature of which has been given in parentheses whenever differing from the one here employed.

A few species which were not brought home have been included. They are distinguished by an asterisk in front of the name.

Finally, I wish to express my obligations to our venerable botanical Nestor, Prof. Asa Gray, for his kindness in identifying the specimens and commenting upon them.

•RANUNCULACEÆ.

Anemone Richardsonii HOOKER.—I, 16. Copper Island, Karabelnij, July 11, 1883. On the mountains, about 400 feet above sea-level. Not common.